

What is claimed is:

5        1. A radiation detector comprising a photodiode and a load connected in series, with the load being connected to the photodiode through a signal contact and to a common bus at the other side, *characterized in that* the detector additionally comprises a transistor and an interrogation pulse generator, with the second photodiode electrode coupled with the second electrode of the transistor, the control electrode of which is coupled with the output of the interrogation pulse generator; and the third transistor electrode is coupled with the common bus.

      2. A radiation detector according to claim 1, characterized in that N groups of elements, each consisting of the series-connected photodiode and transistor, are placed in parallel with the load, and the interrogation pulse generator comprises N outputs; each of the output being coupled with the transistor control electrode from the respective group of elements, where N is an integer > 1.

      3. A radiation detector according to claim 2, *characterized in that* said detector comprises L loads, with  $N_i$  groups of elements being placed in parallel with each i-th load, and the total number of groups of elements contained in said detector equals the number of N outputs of the interrogation pulse generator, where L is an integer > 1,  $N_i$  is a positive integer.

4. A radiation detector according to claims 1 and/or 2 or 3, characterized in that capacitors are connected in parallel with photodiodes.

5. A radiation detector comprising a radiation-sensitive element and a load, with said sensitive element being connected to a supply voltage bus at one side, and the load being connected to a common bus at one side, characterized in that said detector additionally comprises a transistor, a capacitor and an interrogation pulse generator, with the sensitive element being connected to the first electrode of the transistor at the other side and to the first plate of the capacitor, the second plate of which is connected to a signal contact of the load, and the output of the interrogation pulse generator is coupled with the control electrode of the transistor, the third electrode of which is connected to the common bus.

6. A radiation detector according to claim 5, characterized in that N groups of elements, each consisting of the series-connected radiation-sensitive element and a transistor, the common point of which is coupled to the load signal output via the capacitor, are connected between the supply voltage bus and common bus, and the interrogation pulse generator comprises N outputs, each being

connected to the transistor control electrode from the respective group of elements, where N is an integer  $> 1$ .

7. A radiation detector according to claim 6, *characterized in that* said detector comprises L loads, with a signal contact of each i-th load being connected to  $N_i$  groups of elements, and the total number of groups of elements said detector comprises being equal to the number of N outputs of the interrogation pulse generator, where L is an integer  $> 1$ ,  $N_i$  is a positive integer.

8. A radiation detector according to claims 5 and/or 6 or 7, characterized in that the resistors are connected between the sensitive elements and common points of the transistors and capacitors.

9. A radiation detector comprising a radiation-sensitive element and a load, with the sensitive element being connected to the supply voltage bus at one side and the load being connected to the common bus at one side, *characterized in that* said detector additionally comprises a transistor and an interrogation pulse generator, with the sensitive element being connected to the first electrode of the transistor at the other side and the output of the interrogation pulse generator being connected to the control electrode of the transistor, the third electrode of which is coupled with the load signal contact.

10. A radiation detector according to claim 9, *characterized in that* a capacitor is connected between the first transistor electrode and the common bus.

11. A radiation detector according to claim 9 and/or 10, characterized in that a resistor is connected between the transistor first electrode and the sensitive element.

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